

program, the instructions performing the steps comprising:

enabling a programming language editor having a character position cursor;

determining an identity of input to the programming language editor by the user;

automatically resolving symbolic portions of available ones of a plurality of programming language statements by means of a reverse parse evaluation into a partial program compilation that generates identifiable tokens for each of the at least one segment therein in response to the input being on-demand request by the user;

identifying a present programming language statement and at least one segment of the present programming language statement based on a location of the character position cursor;

determining a finite set of information related to the present programming language statement and at least one segment of the present programming language statement based on the automatically generated partial compilation;

automatically generating an assist window of the finite set of information;

receiving a representation of a selection by the computer programmer from the finite set of information; and

modifying the present programming language statement based at least in part on the selected information;

enabling execution of a editing task in response to the input being a programming language editor command;

enabling a first type of commit of an identified menu item from a selection menu assist window in response to the input being a commit key, wherein the step of enabling a first type of commit includes:

identifying the commit key as a non-delimiter type commit key; and

discarding the commit key;

enabling a second type of commit of an identified menu item from a selection menu assist window in response to the input being a commit key, wherein the second type of commit includes:

*E 1* identifying the commit key as a delimiter type commit key; and

inserting the commit key after the identified menu item in the present programming language statement; and

adding to the present programming language statement at a location of the character position cursor in response to the input being a non-commit key type input character. ---

*[* Please amend **claims 17, 26 and 28** as follows:

*6 2* ~~Claim 17. (Twice Amended) A real-time method for assisting a user to modify a programming language statement in a computer program, the real-time method comprising:~~

~~enabling a programming language editor having a character position cursor;~~

~~automatically determining an identity of input to the programming language editor by the user;~~

~~[continuously] automatically resolving symbolic portions of available ones of a plurality of programming language statements by means of a reverse parse evaluation into a partial program compilation that generates identifiable tokens for each of the at least one segment therein in response to the input being an on-demand request by the user;~~

~~identifying a present programming language statement and at least one segment of the present programming language statement based on a location of the character position cursor;~~

~~determining a finite set of information related to the~~

present programming language statement and [the] at least one segment of the present programming language statement based on the automatically generated partial compilation;

automatically generating an assist window of the finite set of information;

receiving a representation of a selection by the computer programmer from the finite set of information; and

modifying the present programming language statement [to] based at least in part on the selected information;

enabling execution of a editing task in response to the input being a programming language editor command;

enabling a first type of commit of an identified menu item from a selection menu assist window in response to the input being a commit key, wherein the step of enabling a first type of commit includes:

identifying the commit key as a non-delimiter type commit key; and

discarding the commit key;

enabling a second type of commit of an identified menu item from a selection menu assist window in response to the input being a commit key, wherein the second type of commit includes:

identifying the commit key as a delimiter type commit key; and

inserting the commit key after the identified menu item in the present programming language statement; and

adding to the present programming language statement at a location of the character position cursor in response to the input being a non-commit key type input character.

~~6~~ <sup>7</sup> Claim 26. (Amended) The computer-readable medium of claim 52[17], wherein the programming language statement is